# OWNER'S MANUAL

Includes Operating and
Maintenance Instructions

## MODEL 5000

Aprilaire®

ELECTRONIC AIR CLEANERS

Nobody Makes Clean Air Easier®

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## WARNING:

- 120 Volts may cause serious injury from electrical shock. Disconnect power to the furnace/air handler before starting installation. Leave power disconnected until installation is completed.
- Arcing in electrical components may cause an explosion. Do not install unit where explosive gasses will be present.
- Sharp edges may cause injury from cuts. Use care when cutting and handling sheet metal.
- To reduce the risk of electrical shock, this equipment has a grounding-type (three prong) plug. This plug will fit only into a grounding-type power outlet. If the plug does not fit into the outlet, contact qualified personnel to install the proper outlet. Do not alter this plug in any way.
- To reduce the risk of electrical shock, locate product so that the power cord can be plugged into an electrical outlet without the use of an extension cord.

## CAUTION:

- To prevent component failure, do not install the air cleaner on the warm air supply or in an area where the temperature may exceed 125° F. This may include areas above heat exchangers in downflow furnaces or above exhaust flues in lowboy furnace cold air returns.
- The air cleaner must be installed where the ambient air temperature remains between 40° F and 125° F [4° C and 52° C].
- Installation must conform to all applicable codes.
- Do not install an atomizing humidifier upstream of the air cleaner. Water or mist will cause power supply to shut down.

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table of contents

## TABLE OF CONTENTS


PAGE

Introduction . . . . . 3

Performance . . . . . 4

Principle of Operation . . . . . 6

Maintenance . . . . . 7

Components . . . . . 7

Trouble Shooting . . . . . 8

Media Replacement Record . . . . . 12

Limited Warranty . . . . . 13

Notes . . . . . 14

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**Thank you** for your recent purchase of an Aprilaire® Electronic Air Cleaner. We sincerely appreciate your business and are pleased to add your name to our growing list of customers. With this purchase, you have invested in the highest quality equipment available. Absolutely no other whole-house air cleaner on the market today can provide cleaner, healthier indoor air. Research Products Corporation is one of the largest manufacturers of indoor air comfort products and a recognized leader in the heating and air conditioning industry.

Please be assured that in addition to product quality and performance, we're also committed to customer satisfaction.

**IMPORTANT: Scheduled replacement of the Aprilaire Electronic Air Cleaner filtering media and cleaning of the control electrode is necessary. See page 7 for details.**

To obtain service parts and/or replacement media, please proceed with any of the following options:

- Call the installer of your Aprilaire Electronic Air Cleaner. This information is often found on your equipment.
- Call your heating and air conditioning contractor.
- Use our Dealer Locator at www.aprilaire.com.
- Look for the Aprilaire brand name in the Yellow Pages under air cleaning and purifying equipment.
- Look in the Yellow Pages under heating and air conditioning contractors. Many contractors can order service parts or media replacements for you.

Please take a few minutes and read this booklet. This will familiarize you with the benefits you will receive from the equipment you just purchased and help you understand the routine maintenance that will

be required. Be sure to register your warranty with us for our records and your protection. You can do this by either returning the warranty registration card or by registering on line at www.aprilaire.com/warranty.

Your Aprilaire Electronic Air Cleaner delivers the cleanest, healthiest air ever available from a whole-house air cleaner! It is an investment in healthful comfort for your family and protection for your home and furnishings.

Your Aprilaire Electronic Air Cleaner features patented, breakthrough "electrically enhanced air filtration" technology that provides a unique combination of both electronic and media air cleaner qualities. It permanently traps even the smallest particles so they cannot re-enter the air stream.

## PERFORMANCE

Air cleaners are effective only when air is circulated through them. The Aprilaire Electronic Air Cleaner operates silently, removing a very high percentage of the pollutants from the circulated air while maintaining its level of efficiency with use. There is pollution in air everywhere – even in the air we normally consider to be fresh outdoor air. The infiltration of outside air into the home can be minimized by keeping doors and windows closed as much as possible, therefore, increasing the indoor air quality.

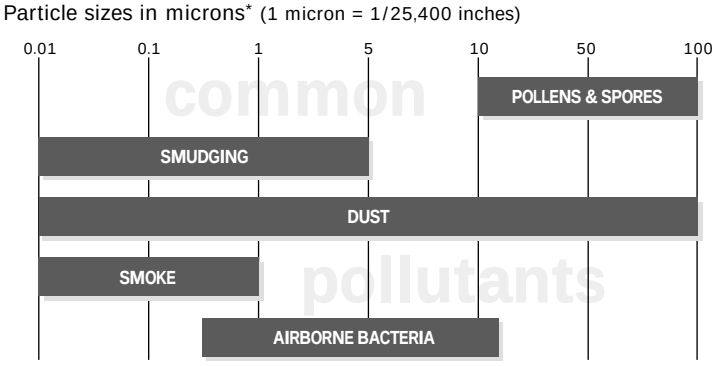
You may have purchased your air cleaner for allergy relief. Allergy cases differ widely – and not even the Aprilaire Electronic Air Cleaner is a sure cure for any allergy. However, this air cleaner can be highly beneficial because it is over 98.5% efficient at removing particles the same size as allergy-causing pollen, fungus, mold, and spores from the air passing through it, which makes it the healthy choice for cleaner indoor air. It will also remove over 90% of particles the same size as many disease-causing airborne bacteria.

The reduction of household dust, tobacco smoke particulate, and smudging particles may have been the motivating influence in your decision to have an air cleaner installed. The Aprilaire Electronic Air Cleaner removes 86% of cigar and cigarette smoke particulate which represents greater efficiency than any other residential air cleaner. Since this air cleaner reduces the amount of particles in the air, you can expect

a reduction in the need for dusting and cleaning and a longer time interval between redecorating.

The efficiency of the Aprilaire Electronic Air Cleaner on the smallest particle which can be seen with the naked eye (approximately 10 microns) is never less than 99%.

### Common Pollutants




*American Society of Heating, Refrigeration and Air Conditioning Engineering Guide

The visible household dust particles, and nearly all pollen and spore particles, therefore, can be caught and permanently and easily held if you can get them to the air cleaner.

### Recommendations for Optimum Performance

The air movement function of a central air cleaner is performed with the blower of your heating/air conditioning system. Continuous air cleaning will be accomplished when your thermostat is set for continuous air circulation. If continuous air cleaning is not required, or desired, you can manually set your control for any time period you desire. Many thermostats have a switch position for manual fan. “Automatic” turns on the blower only when heating or cooling is required. “Fan” or “manual” allows you to control blower operation.

For those who choose periodic cleaning (as opposed to continuous cleaning through continuous furnace blower operation), the most important period is during – and for several hours after – vacuuming your home. The vacuuming process (unless you have a central vacuum system) stirs up a large volume of dust particles which must be drawn into your air cleaner.

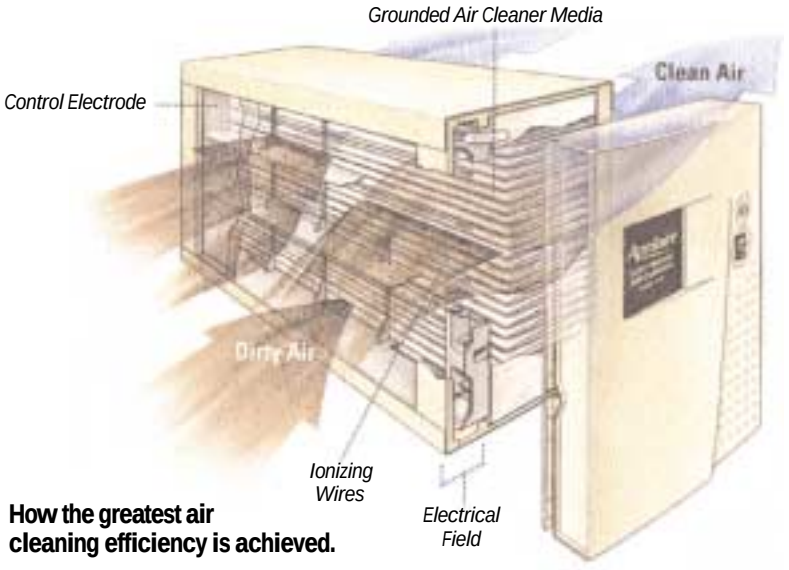
Many of the dust particles generated while vacuuming, are so heavy that they "fall" out of the airstream before they can be drawn out of your living area. This is why it is important to do household dusting several hours after vacuuming. Normally once the heavy particles "fall out," they are only reintroduced to the air by vacuuming, or similar vigorous activity.

## operation

### PRINCIPLE OF OPERATION

The Aprilaire Model 5000 Electronic Air Cleaner is an electrically enhanced high efficiency air cleaner that utilizes an ionization and electric field. It is the first and only residential air cleaner that utilizes this recently patented technology. As shown in the schematic below, a particle passes a control electrode and enters an intense ionization and electric field. This intense electric field ionizes (applies an electrical charge to) the airborne particles. The charged particles are then attracted to and collected by the air cleaner media, which is maintained at ground by means of the ground electrode. Then, the clean air is distributed throughout your home.

**Combination of Media and Electronic Technologies Improves Efficiency**



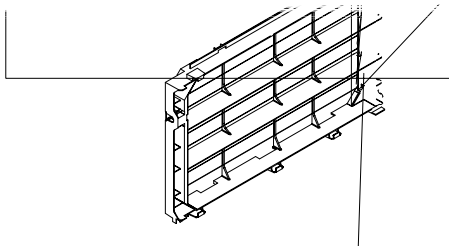

**How the greatest air cleaning efficiency is achieved.**

*Particles entering the air cleaner pass through a control electrode, which focuses and intensifies an electrical field generated by the ionizing wires. The particles are charged in the electrical field and then collected on grounded micro-fiber media.*

## MAINTENANCE

Replacement of your Aprilaire Air Cleaner media is normally required just once a year. However, in an excessively dusty environment (i.e., in a new home or during/following a remodeling project) it may be required more frequently. Replace the media according to the instructions on the Stock No. 501 replacement media carton. **For air cleaner to function properly, you must use only Aprilaire Stock No. 501 replacement media.** Semi-annually, you should inspect the control electrode and ionizing wires for dust and dirt build-up. If necessary, remove the control electrode and clean by rinsing it with water. With a damp cloth, gently wipe any dust from the ionizer frame and wires. The control electrode, ionizer frame, and ionizing wires must be completely dry for the air cleaner to operate.

## COMPONENTS OF APRILAIRE ELECTRONIC AIR CLEANER – MODEL 5000



## TROUBLE SHOOTING

When the air cleaner is operating correctly and the following conditions are met, the green light on the power pack/door assembly will be on:

- The air cleaner is correctly assembled and installed.
- The power pack/door assembly is fully closed.
- The unit is plugged into a live 120 VAC outlet.
- The switch is in the ON position.
- The furnace/air handler blower is running.

If those conditions are met and the green light does not come on, the air cleaner circuit is not being activated. If the green light blinks at approximately one-minute intervals, the air cleaner circuitry is attempting to turn on, but is quickly turning off due to either an over-current condition or because arcing is occurring between components. Check the inner assembly as follows:

1. Turn the furnace/air handler blower off.
2. Turn the air cleaner off.
3. Unplug the air cleaner.
4. Open the power pack/door assembly.
5. Remove the inner housing assembly.

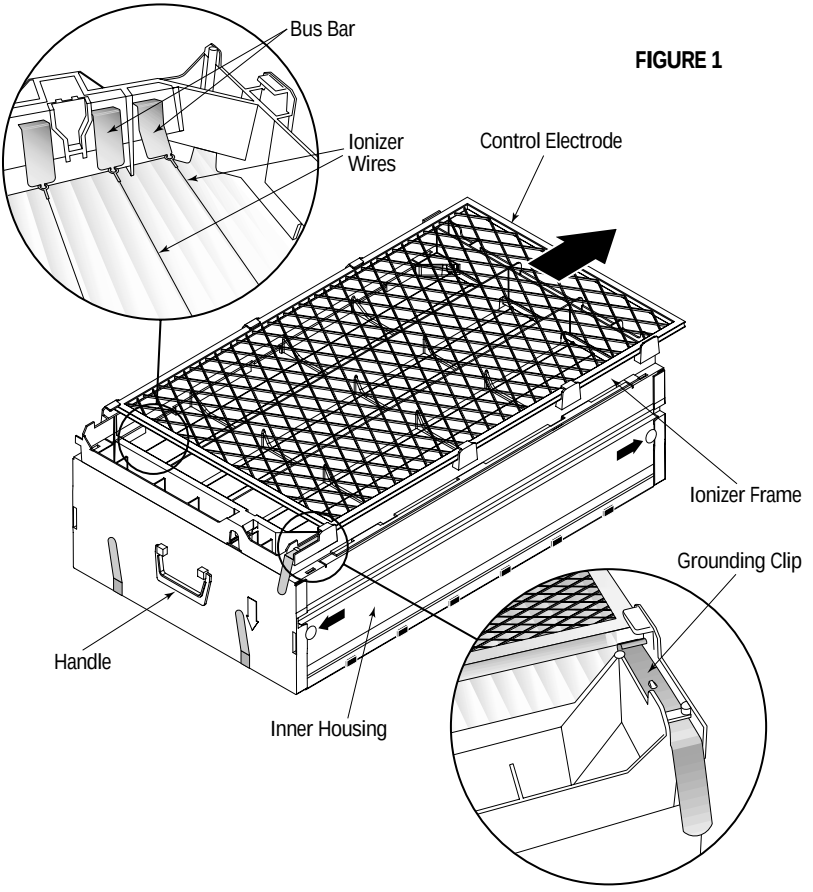
*(Continued on next page)*

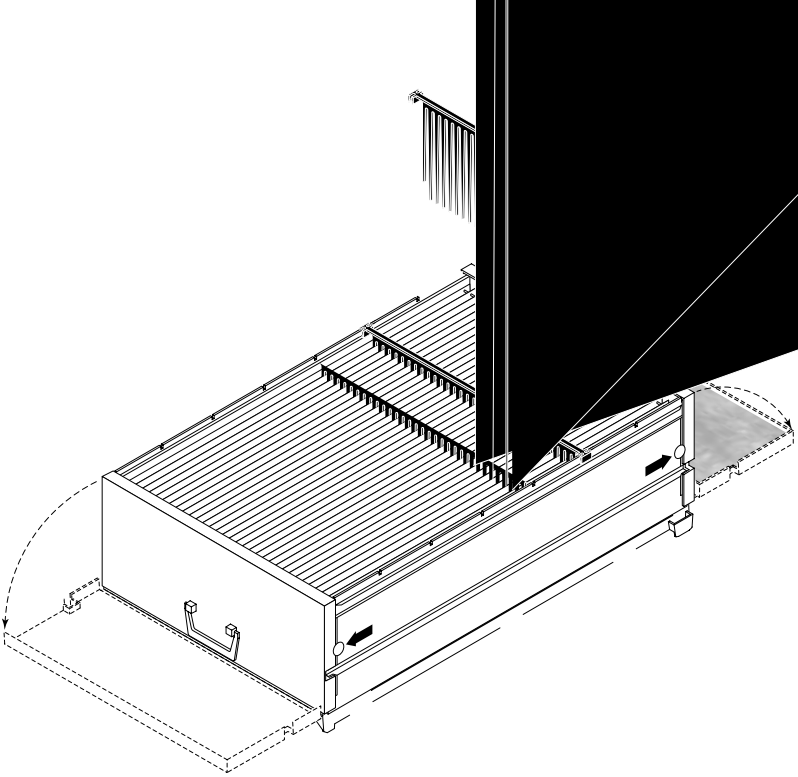
**TROUBLE SHOOTING (Continued)**

**6.** Inspect components to ensure the following:

- **a.** All components must be dry.
- **b.** The ionizer frame-grounding clip must be in contact with the control electrode. See Figure 1.
- **c.** The conductive rubber strip must be in contact with the conductive-coated tips of the media. See Figure 2.
- **d.** The nine ionizing wires must be clean, straight, and hooked onto the bus bar at one end and the ionizer frame at the other. See Figure 1.

**FIGURE 1**





**e.** The control electrode must be properly inserted in the ionizer frame.

**f.** The openings for the airflow detection circuit on the inside of the power pack/door assembly must be unobstructed. See Figure 3 on next page.

**g.** There must be no debris bridging the gap between the ionizing wires and any other component.

**7.** Re-install the inner housing assembly and close the power pack/door assembly.

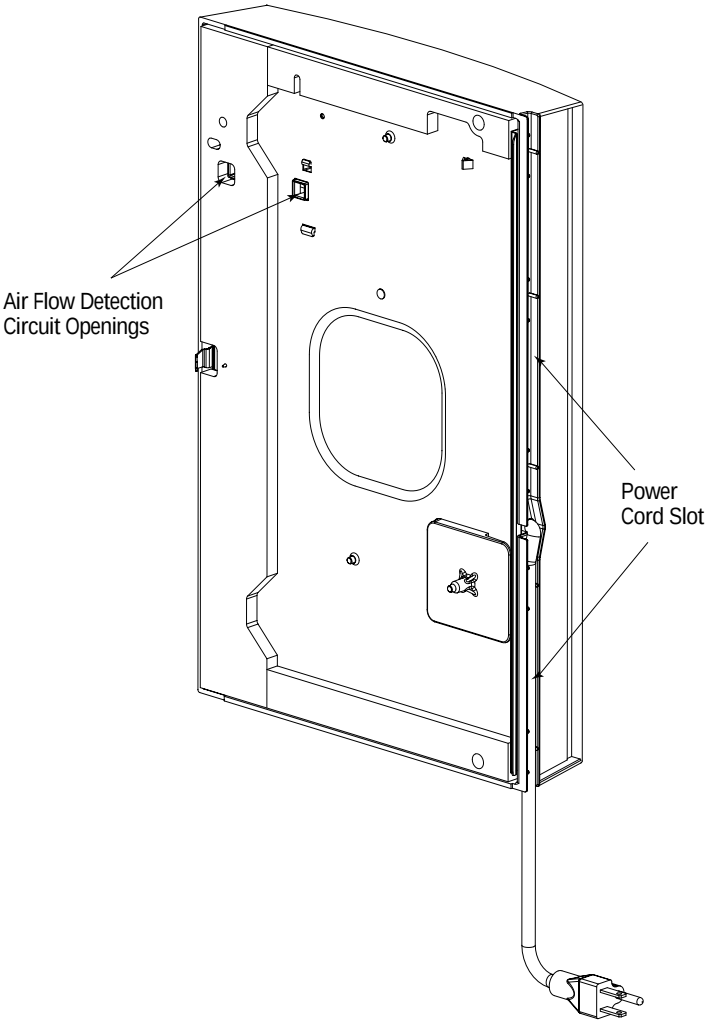
**8.** Plug in the unit and turn it on.

**9.** Turn on the furnace/air handler blower.

**10.** Wait three minutes after the blower starts and check unit for proper operation. (The airflow sensing circuitry takes a few minutes to warm up the first time the unit is plugged in and turned on.)

**TROUBLE SHOOTING (Continued)**

**FIGURE 3**



## MEDIA REPLACEMENT RECORD

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warranty

## LIMITED WARRANTY

Your Research Products Corporation Aprilaire Electronic Air Cleaner is expressly warranted for two (2) years from the date of installation to be free from defects except, however, for the disposable media which will have to be replaced from time to time depending upon the use, and the inner housing seals. Research Products Corporation's exclusive obligation under this warranty shall be to supply, without charge, a replacement for any part of the Electronic Air Cleaner which is found to be defective within a two (2) year period and which is returned not later than thirty (30) days after said two (2) year period by you or your original supplier to Research Products Corporation, Madison, WI 53701, together with the model number and installation date of the Electronic Air Cleaner.

THIS WARRANTY SHALL NOT OBLIGATE RESEARCH PRODUCTS CORPORATION FOR ANY LABOR COSTS AND SHALL NOT APPLY TO DEFECTS IN WORKMANSHIP OR MATERIALS FURNISHED BY YOUR INSTALLER AS CONTRASTED TO DEFECTS DISCOVERED IN THE AIR CLEANER ITSELF.

IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE SHALL BE LIMITED IN DURATION TO THE AFORESAID TWO YEAR PERIOD. RESEARCH PRODUCTS CORPORATION'S LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES, OTHER THAN DAMAGES FOR PERSONAL INJURIES, RESULTING FROM ANY BREACH OF THE AFORESAID IMPLIED WARRANTIES OR THE ABOVE LIMITED WARRANTY IS EXPRESSLY EXCLUDED. THIS LIMITED WARRANTY IS VOID IF DEFECT(S) RESULT FROM FAILURE TO HAVE THIS UNIT INSTALLED BY A QUALIFIED HEATING AND AIR CONDITIONING CONTRACTOR. IF THE LIMITED WARRANTY IS VOID DUE TO FAILURE TO USE A QUALIFIED CONTRACTOR, ALL DISCLAIMERS OF IMPLIED WARRANTIES SHALL BE EFFECTIVE UPON INSTALLATION.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages so the above exclusion or limitations may not apply to you.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

notes

**NOTES**

# Aprilaire®

THE BEST IN INDOOR AIR COMFORT

The Aprilaire® Indoor Air Comfort System is an integrated group of air quality enhancement products designed to work with your heating and cooling system to make your home more comfortable. For the best in indoor air quality, ask your heating and cooling contractor about these fine Aprilaire products, or visit us at **www.aprilaire.com** to solve your Indoor Air Comfort needs.

## Aprilaire®
## Automatic Humidifiers

The Best Cure For Dryness®

The world's first computer-equipped, completely automatic humidifiers.

## Aprilaire®
## High Efficiency Air Cleaners

Nobody Makes Clean Air Easier®

Delivers the cleanest, healthiest air ever available from a whole-house air cleaner.

## Aprilaire®
## Fresh Air Exchangers

Only The Freshest Homes Have April Air™

Your best value for a constant, controlled supply of fresh air with energy-recovery.

## Aprilaire®
## Zone Control Systems

Custom Comfort Throughout Your Home®

The most reliable way to achieve temperature control in every area of your home.

## Aprilaire®
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